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(A STUDY OF THE FARM BUSINESS ^{Vol. 2})

IN THE
CARLYLE-MOOSOMIN AREA
OF
SOUTHEAST SASKATCHEWAN, 1948

GORDON HAASE)



Canada

DEPARTMENT OF AGRICULTURE

Marketing Service - Economics Division

Ottawa, July 1952



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A STUDY OF THE FARM BUSINESS IN THE CARLYLE-MOOSOMIN AREA
OF SOUTHEASTERN SASKATCHEWAN, 1948

Gordon Haase 1/

INTRODUCTION

This study extends the investigations of the farm business in Saskatchewan into the park belt or black soil zone of the province. In previous years, farm management research was directed towards the prairie, or plains area. This was in response to the acute problems experienced by farmers in this area during the droughts of the thirties and the results of these studies now provide a fairly complete inventory and description of the farm business in prairie areas.^{2/} In later years, these studies tended to emphasize the more northern park or wooded areas of the province, and there are two main reasons for this development. In the first place, settlement in some of these parts, which was relatively new and based largely upon migration from the prairies, was encountering difficulties of its own.^{3/} In addition, it began to be realized that areas of park and virgin forest land, similar in many respects to the developed areas of the park belt, presented opportunities for potential settlement and agricultural development on a substantial scale. The experience of the older areas, in terms of organizational aspects and farm practices, would serve as a guide in the development of the new.^{4/}

These considerations permit the general orientation of the present study. In the earlier northern studies the pioneering aspects of the areas were the main concern. In this study, the area involved while similar in many physical respects to a large portion of the park area, has been settled for over half a century. As a result, the patterns of land use and of farm size and type should have achieved a high degree of adaptation. The description of this stage of agricultural development will thus complement the study of the farm business in parkland areas which was presented in earlier reports.

In addition to these general considerations the final delineation of the actual area to be studied involves two additional requirements. In the first place the survey area should be similar in soil, climate, and general type of farming adaptation to the typical park land of the province. At the same time the area should have a typical crop yield experience in the

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- ^{1/} Associate Economist, Economics Division, Marketing Service, Department of Agriculture, Ottawa, Ontario.
 - ^{2/} See, for example, An Economic Classification of Land in Fifty-six Municipal Divisions, South Central Saskatchewan, C.C. Spence, and E.C. Hope, Publication 728, Department of Agriculture, Canada.
 - ^{3/} See, An Economic Study of Land Settlement in Representative Pioneer Areas of Northern Saskatchewan, R.A. Stutt, and H. Van Vliet, Publication 767, Department of Agriculture, Canada.
 - ^{4/} See, for example, Use of Power Machinery in Bush Land Improvement in Northeastern Saskatchewan, M.E. Andal, Publication 814, Department of Agriculture, Canada.

year under study. This latter condition is imposed by the nature of the study itself, which seeks to describe the farm business of an area in terms of a single year's experience. In order to achieve this, both physical yields and farm prices should reflect their normal levels. Adjustments for price aberrations are comparatively easy but unusual yields may cause departures from the normal farm practices, and should, therefore, be avoided wherever possible in the selection of a survey area.

In relation to these requirements the area selected for study comprises a block of ten rural municipalities in the Carlyle-Moosomin area of South-eastern Saskatchewan. It will be noted that this area coincides with Saskatchewan Agricultural Representative District No. 5.

Purpose of Study

The general purpose of this study was to determine the character of settlement and of farm organization in the Carlyle-Moosomin area. Information obtained in the field was directed to this end, and included an inventory of land, livestock, machinery and other assets, a complete statement of cash receipts and expenditures for the crop year 1947-1948, and data on land utilization and other farm practices sufficient to give an accurate picture of farm organization. Within the overall scope of the study, the following specific objectives may be outlined:

1. To indicate the patterns of settlement, tenure and farm size in the area.
2. To describe the use of land and the most predominant types of farming in the area.
3. To make an inventory of the land, labour and capital resources of the area and to determine the levels of income and family living.
4. To examine the relative efficiencies of different sizes and types of farm units.
5. To indicate the financial progress of farm operators.

The study makes available information which may be useful in the development of Provincial Agricultural Extension programs which are being organized on the basis of these districts.

Method of Study

The field survey method was used to collect the primary data and two main types of information were obtained. First, the conditions of ownership and occupancy were recorded for each parcel of land in the entire area. This information served as a basis for the preparation of a map of the survey area, showing the size and location of each farm unit and the type of tenure under which each parcel in the unit was held. An overall picture of all the farms in the area was thus obtained, with respect to tenure, size and location. The second type of information related to the details of organization and

operation of typical farms within the area. This information was obtained from a sample of three hundred and twenty-eight farm operators throughout the area. 1/

On the basis of the occupancy information obtained, it was possible to make the sample of farms conform to the population in regard to size and tenure. For each municipal unit the size and tenure groups were well-defined, and the visited farms were chosen at random within these groups. The resulting stratified sample obtained amounted to about one-eighth of the farms in the survey area.

The primary data collected in the field apply to the survey year only. Pertinent information for earlier years is available from several sources. For example, the publications of the Census Division, Dominion Bureau of Statistics, report on many aspects of land use and farm organization in the census years. The Secretary of Statistics of the Saskatchewan Department of Agriculture has a record of wheat yields in this area which extends back over a considerable period of years. These and other similar sources thus provide data that are complementary to those provided by the farm operators in 1948.

CHARACTERISTICS OF SURVEY AREA

Physical Features

The survey area is situated in Southeastern Saskatchewan, adjacent to the Manitoba boundary on the east, and to the Qu'Appelle River on the north. The western boundary lies on an imaginary line running approximately south from the town of Whitewood to the town of Carlyle, and the southern edge of the area extends from Carlyle to Antler. The area is a rectangular block about sixty miles long and forty miles wide, and contains ten rural municipalities.

The surface features of this area include the Qu'Appelle River to the north, and the Pipestone Creek which runs diagonally from the northwest through the south central portion of the area. The topography associated with these water courses is mainly rough and eroded, with no cultivation. In the south the hills of the Moose Mountains rise to an elevation several hundred feet above the surrounding plain. This region has been developed as a provincial park and only a few small isolated plots of cultivation are to be found.

In many respects the climate of the survey area is representative of the park belt of the province. For example, the total annual precipitation at the town of Carlyle during the years 1923-40 averaged about 16.3 inches. 2/

1/ The record of each farm visited included an inventory statement and a complete operating statement for one year. The schedule provided checks with respect to all important entries, and included a trial balance to ensure the complete enumeration of all business transactions during the year under review.

2/ Rainfall Records for Saskatchewan, Agricultural Extension Bulletin No. 18, University of Saskatchewan, College of Agriculture, p. 17.

During the thirty years prior to 1948 the yield of wheat throughout the entire area averaged about 15.6 bushels per acre. ^{1/} However, the growing season seems to be somewhat longer than in the more northerly areas of the park belt. For the survey area as a whole, the period between the last killing frost of spring and the first killing frost of fall is about one hundred and twenty days. This compares with about one hundred and twenty-five days in the central prairie areas, and about one hundred days in the more northerly park areas. ^{2/}

The region is quite well served by railroads and improved highways. The main line of the Canadian Pacific Railway crosses the area between Moosomin and Whitewood, and several branch lines serve the remaining portion of the area. The region also has two improved highways running from north to south, and three running from east to west. The system of secondary roads, however, is not well developed and even main market roads in 1948 became almost impassable in periods of wet weather.

Settlement

Early settlement in this area, as in all other parts of the prairies, was closely related to railway development. The main line of the Canadian Pacific Railway reached Moosomin in 1882, although some settlers had pushed their way west from Brandon even before that year. From Moosomin the stream of settlement moved into the survey area along two main lines. The first was the railroad that continued westward, and the second was the Moosomin Trail, running overland to the southwest to the Moose Mountains and the town of Carlyle. From these early routes scattered settlements were established throughout the area well before the turn of the century. The later railway branch lines, as they were completed, both facilitated the new settlement and provided improved services for earlier settlers, some of whom had settled at considerable distances from the railroad.

The land of the area was mostly available to new settlers as homesteads and through purchase from the Canadian Pacific Railway. Of the 328 farm operators interviewed in the 1948 survey, 18 were settlers who had begun on homesteads which were then a part of the farm unit. Many homesteaders were soon able to add to their original parcel through purchase of adjoining land and there were substantial areas of open land which were easily brought under cultivation.

Many of the original settlers of the area came west from the province of Ontario. They were for the most part experienced farmers and their establishment on farms in the area was relatively successful. A number of settlers, however, came directly from the British Isles, and the experiences of these and of the colonies they established are among the most interesting sidelights on the settlement of this part of Saskatchewan. The establishment of the Scottish crofters, south of Wapella and the picturesque life of Canningston Manor are notable incidents in the social and agricultural

^{1/} Secretary of Statistics, Saskatchewan Department of Agriculture, Unpublished Material.

^{2/} B.W. Currie, Climate of Saskatchewan, published in Guide to Farm Practice in Saskatchewan, University of Saskatchewan, 1948.



General View of Topography, Cover and Field Lay-out
Typical of Much of the Study Area.



Many Areas Have Been Completely Cleared
and Permit Larger Fields.

development of this region. 1/

Size of Farms

In order to determine the pattern of settlement, a census was taken of all parcels of land in the area in 1948. The owner and occupant of each parcel were reported, and this made it possible to identify each farm unit. In 1948, the area contained a total of 2,768 farm establishments. It was then possible to show the distribution of farms of the area according to total size, and this information is shown in Table 1. The significant feature of this table is the large proportion of farms which, after some 50 years of settlement, are still only one, two and three-quarter sections in size.

Table 1.- Distribution of all Farms in Survey Area According to Size and Tenure, Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Fully owned	Partly owned	Fully rented	
Size of farm unit	farms	farms	farms	Total
	- number of farms -			
1 quarter section	230	-	29	259
2 " "	645	58	112	715
3 " "	418	132	57	607
4 " "	279	134	51	464
5 " "	110	107	14	231
6 " "	67	73	7	147
7 " "	45	36	2	83
8 " "	32	39	4	75
9 quarter sections and over	26	40	1	67
Total farms	1,852	619	277	2,748
Non-farm units a/				20
Total establishments				2,768

a/ Tenure unknown.

Farm Tenure

Farm tenancy may be examined with regard first to the tenure of individual farms and secondly to the relative proportions of farms in the area held under different types of tenure. In the first place, a parcel may be operated by its owner or operated under crop rental or grazing lease. Unoccupied land includes vacant and abandoned farm land, townsites, and land held in non-farm

1/ See, for example, Canadian Frontiers of Settlement, edited by W.A. Mackintosh and W.L.G. Joerg. Vol. II, History of Prairie Settlement and Dominion Lands Policy, by A.S. Morton and Chester Martin, and Vol. V, Agricultural Progress on the Prairie Frontier, by R.W. Murchie, William Allen, and J.F. Booth. The Macmillan Company of Canada Limited, Toronto, 1938.

units. 1/ About three-quarters of the individual quarter-section parcels in the area were operated by their owners in 1948. In that year about 20 per cent of the parcels were held under some type of leasing arrangement. Less than three per cent of all parcels were unoccupied in 1948, while the remaining two per cent were parcels held in non-farm units and townsites.

For the farm units in the area, the tenure situation may be described in terms of the relative proportions of farms which are fully owned, partly owned, or fully rented. In general, these proportions reflect the progress that has been made towards full ownership of land by the farm operator. At the same time, these proportions are significant only when related to the sizes of the farms concerned, and the relationships between size and tenure for the farms in this area are also shown in Table 1. About two-thirds of all farms were fully owned by their operators in 1948. In general, a higher proportion of the smaller farms were entirely owned by their operators than of the larger units which usually contained some rented land.

THE USE OF THE LAND

The parkland areas of Saskatchewan are characterized by particular conditions of soil, climate, and topography. The high organic matter content in the soil, an adequate supply of moisture, and a combination of tree and tall grass vegetation mark the parkland areas. Soil, climate, and topography are the main factors which determine the types of farming followed, and, therefore, the majority of parkland farms should exhibit aspects of organization which are common within the group, and yet different from the farms operating under distinctly prairie conditions.

The general characteristics of farm organization of an area may be considered first with reference to the pattern of land use which has developed. There is first the relation of cultivated land to the unimproved land area. For the survey area this relationship is shown by the extent of cultivation on the individual quarter-section parcels within each of the municipal units which comprise the area.

The data indicate that in 1940 about one-half of the quarter section parcels of the area had less than 80 cultivated acres and almost one-fifth were not cultivated at all. On the basis of interpolations allowed by the following data it would appear that over three-quarters of the cultivated land in the area is contained in parcels having more than 80 cultivated acres each.

While the extent of cultivated land in the area would change only slowly, the use-pattern of the improved crop land would be more variable. Cropping practices change somewhat in response to changes in the prices or relative prices of alternative crops. For this reason it is desirable to show the use of land for more than one year to indicate the typical situation, rather than to base such indications on any single year. Accordingly, the use of land as reported by the Dominion Bureau of Statistics

1/ Non-farm units include farms whose headquarters are outside the survey area and farms operated by residents having another full-time occupation.

Table 2.- Distribution of Quarter-Section Parcels According to Area Under Cultivation, Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948 a/

Rural municipality	No.	Acres broken					Total
		None	1-40	41-80	81-120	Over 120	
- number of quarter-sections -							
Antler	61	353	50	179	283	383	1,248
Moose Mts.	63	61	92	201	270	396	1,120
Maryfield	91	208	85	227	323	309	1,152
Walpole	92	192	104	295	479	202	1,272
Wawken	93	181	173	333	256	74	1,017
Moosomin	121	46	37	156	368	257	864
Silverwood	123	218	154	391	389	144	1,296
Rocanville	151	205	100	234	356	264	1,159
Willowdale	153	184	133	352	227	61	957
Total		1,924	1,011	2,666	3,189	2,159	10,949
Per cent		17.6	9.2	24.3	29.1	19.7	99.9

a/ Compiled from Saskatchewan Assessment Commission, Valuators' Field Sheets, 1940.

for the census years 1941 and 1946 is summarized for the ten municipalities in the survey area and is presented in the following table.

Table 3.- Summary of the Use of Land in Ten Municipalities, Carlyle-Moosomin Area, Southeastern Saskatchewan, 1941 and 1946 a/

	Average Acres per farm		Per cent of cultivated acreage		Per cent of total acreage	
	1946	1941	1946	1941	1946	1941
Wheat	65	57	27.4	25.5		
Oats	47	35	19.9	15.8		
Barley	32	22	13.4	9.7		
Flax	4	2	1.8	1.1		
Rye	1	11	.3	5.1		
Temporary idle	-	-	-	-		
Other crops and pasture	11	11	4.9	5.1		
Summerfallow	77	84	32.3	37.7		
Total cultivated acres	237	222	100.0	100.0	49.2	49.6
Farmstead and other improved acres	6	5			1.3	1.2
Unimproved acres	238	221			49.5	49.2
Total assessed acres	481	448			100.0	

a/ Dominion Bureau of Statistics, "Census of Agriculture", 1941 and 1946.

A further indication of the use of improved land is given by the cropping practices followed on 328 farms visited in the course of the farm survey in 1948. In the sampling procedure the visited farms were selected from well-defined size and tenure groups with numbers proportionate to the size and tenure distribution of all farms in the area. Random selections of farms within respective size and tenure groups were carried out mainly within successive municipal areas so that the resulting sample can be used to describe the individual municipal units as well as the area as a whole. The use of land for the 328 farms in the sample is given in the following table.

Table 4.- Use of Land on 328 Farm Units, Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Average acres per farm	Per cent of cultivated acreage	Per cent of total acreage
Wheat	66	24.2	
Oats	52	19.2	
Barley	38	14.0	
Flax	10	3.6	
Rye	1	0.5	
Temporary idle	2	0.8	
Other crops	7	2.6	
Summerfallow	93	34.0	
New breaking	3	1.1	
Total cultivated acres	272	100.0	53.4
Farmstead and other improved acres	7	-	1.4
Unimproved acres	232	-	45.3
Total assessed acres	511	-	100.0

For the group of 328 farms, the average size of farm was about 511 acres, of which 272 were cultivated. Both total size and cultivated area represent significant increases over their 1941 levels. At the same time, it is notable that after fifty years of settlement only a little over half of the total area of the farm had been brought under cultivation. This situation is reflected in the small amount of new breaking that was done in 1948, amounting to only about three acres per farm, or about one per cent of the present cultivated acreage.

Among the cultivated crops, wheat has been consistently the most important. Oats and then barley follow in that order, and these three cereals normally have occupied almost 60 per cent of the total cultivated acreage. One of the most stable components of the rotational pattern has been the summerfallow acreage, indicating that the traditional practice of one-third of the total being fallowed each year has been closely observed in the area.

FARM CAPITALIZATION AND THE INCOME ACCOUNT

The following analysis takes account of the financial transactions for a period of one year, approximately from May 1, 1947, to April 30, 1948, including both the crop production period and the following entire winter feeding period for livestock. However thoroughly this accounting period may be studied, it does not serve as a base for projecting the experience of the farm business either backwards or forwards for it is an unique period in the operation of each of the farms studied. Even if yields are typical in the study year and prices are adjusted so as to represent a more typical situation, the analysis pertains to a static situation whereas the organization of the farm is liable to change over time in response to relative prices and advancing technology. Business transactions for one year permit comparisons for certain important aspects of the farm business, and between the various size and type of farming combinations found in a particular area, at the particular period of time when the data are gathered.

Farm Capital

The cash transactions of the farm business give a preliminary indication of both general farm organization and returns to the business for the period under review. Receipts and expenditures are, moreover, directly related to farm capital in two main aspects. In the first place, returns should be related to the amount of capital in use. Secondly, when the net cash position is adjusted for depletion or accumulation of capital, the net returns to the farm operator and the farm capital are indicated.

For the farms included in this study, the average capital investment was \$16,714, or an average of \$62 per cultivated acre. The distribution of this investment over the main capital items is a further indication of the general type of farming organization. Details on the various types of investment in relation to size and type of farm are given in Table 5.

Total capitalization ranges from \$70 per acre of cropland on smaller farms, to \$62 per acre for medium sized farms and to \$57 per acre of cropland on the larger farms in the sample. This relationship is consistent for all the main capital items, which show reduced per acre investment for the groups of larger sized farms.

The distribution of investment reflects the greater importance of livestock on the smaller farms, although the average value of livestock on those farms is only about 20 per cent of the total value of the farm. On the larger farms, the livestock enterprise represents only 12.5 per cent of total investment, although in absolute value, it is more than double the investment for livestock of the smaller farms.

Farm Receipts

Further aspects of farm organization may be indicated by an examination of the sources of receipts for typical farms and of the main items of expense that are entailed in the course of a year's business.

a/
Table 5.- Distribution of Investment in Relation to Size and Type of Farm
Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Size of farm									
	Up to 199		200-299		300-399		Over 400			
	crop acres		crop acres		crop acres		crop acres			
	Number of productive animal units									
	14 and : under :	15 and : over :	17 and : under :	18 and : over :	21 and : under :	22 and : over :	32 and : under :	33 and : over :		
	- average dollars per farm -									
Real estate	4,424	6,133	7,876	9,052	11,690	13,464	16,278	19,383		
Livestock	1,052	2,909	1,308	3,358	1,777	4,183	2,302	6,286		
Machinery	1,737	2,309	2,859	3,954	4,113	4,992	6,137	7,590		
Seed, feed and supplies	259	416	528	988	727	1,125	1,377	1,436		
Total investment	7,472	11,767	12,571	17,352	18,307	23,764	26,094	34,695		
Number of farms	61	47	54	51	28	28	36	23		

a/ Valuations are for end of year inventory.

Farm receipts, to a large extent, reflect the pattern of land use and show the place of the livestock enterprise in the farm organization. Variations in farm types are mainly differences in the relative importance of the livestock enterprise, and the proportion of farm receipts derived from the sale of livestock and livestock products was taken as the basis for defining the various types of farm organization found in this area. Farm receipts are ordinarily closely related to farm size. The distribution of farm receipts, however, reflects variations associated with size of farm along with differences related directly with farm types. When farm receipts are examined first in relation to size of farm, the distribution of farm receipts within size groups begins to show the inter-relationship of size, type, and total receipts of farms in this area. These data are shown in Table 6.

For the entire sample of farms, the receipts from the sales of livestock and of farm produce, which consists mainly of livestock products, amounted to over thirty per cent of all cash receipts. Receipts from wheat sales accounted for slightly more than one-quarter of total receipts and the receipts from sales of other field crops were in turn only slightly higher than those from wheat sales. The relative importance of livestock varied with size of farm, with livestock being more important in the organization of smaller than of larger farms. Receipts from livestock sources represented a consistently smaller proportion of total receipts as size of farm increased. However, the size of the livestock enterprise itself increased with the area of the farm and the group of the smaller farms in the foregoing table each had about 15 productive animal units, while the average for the group of larger farms was about double that amount of livestock.

The livestock complement of these farms was very closely related to the labour supplies available on the farm. For all the farms in the sample, the relationship between livestock and labour was 19.2 productive animal units per man equivalent. This ratio was almost constant throughout the range of farm sizes, and each size group average was within one animal unit per man equivalent of the average for the whole sample.

Farm Expenses

Farm expenses may be examined in two different aspects. First, in relation to farm receipts, and secondly with respect to the distribution of outlays among the various farm enterprises. The former comparison indicates the cash position of the farm business for the year under study. The distribution of expenses, on the other hand, reflects the type of farm organization and also permits a preliminary appraisal of the effectiveness of the individual enterprises. As in the case of farm receipts, total expenses normally vary with the size of farm and the relationship between size and expenses are shown in Table 7.

Total cash expenses averaged \$835 for the smaller farms, \$1,751 for the medium sized farms, and \$3,178 for the large farms in the group. On the basis of cultivated acreage, these expenditures represent cash costs of \$6.33 per cultivated acre for the small farms, \$6.32 for the medium sized farms, and \$6.14 per cultivated acre for the large units. These figures indicate that the larger farms have achieved no substantial economy over the smaller units in the matter of their cash operating expenses. The

Table 6.- Distribution of Cash Farm Receipts According to Farm Size, 328 Farms,
Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

Item	Size of farm						All farms		
	Up to 199		200-399		Over 400		Dollars : Per cent : Dollars : Per cent : Dollars : Per cent		
	acres : Dollars : per farm :	of total : of total : of total :	cultivated acres : Dollars : per farm :	of total : of total : of total :	cultivated acres : Dollars : per farm :	of total : of total : of total :	acres : Dollars : per farm :	of total : of total : of total :	of total : of total : of total :
Wheat	403	20.2		26.8	2,117	28.5		1,044	26.3
Other crops	435	21.8		27.1	2,442	32.9		1,117	28.1
Cattle	493	24.7		16.7	1,103	14.9		691	17.4
Other livestock	212	10.6		7.5	420	5.6		295	7.4
Livestock produce a/	255	12.8		7.0	234	3.2		265	6.7
Other farm receipts	199	9.9		14.9	1,111	14.9		561	14.1
Total farm receipts	1,997	100.0	4,039	100.0	7,427	100.0	3,973	100.0	
Number of farms	108		161		59		328		

a/ Includes only occasional sales of wood or garden products.

Table 7.- Distribution of Farm Expenses According to Size of Farm,
Carlyle-Moosomin, Southeastern Saskatchewan, 1948

Item	Size of farm									
		Up to 199		200-399		Over 400		All farms		
		cultivated acres	Dollars	cultivated acres	Dollars	cultivated acres	Dollars			
									Per cent	Per cent
	per farm	of total	per farm	of total	per farm	of total	per farm	of total	per farm	of total
Taxes on real estate	97	11.5	172	9.6	318	9.4	173	9.8		
Other real estate expenses a/	69	8.2	129	7.2	217	6.3	125	7.1		
Livestock expenses b/	59	7.0	61	3.4	101	3.0	68	3.8		
Crop expenses c/	81	9.6	170	9.5	318	9.4	167	9.4		
Equipment expenses d/	340	40.2	748	41.5	1,351	39.8	722	40.8		
Custom work e/	110	13.0	177	9.8	142	4.2	149	8.4		
Labour f/	67	7.9	269	15.0	707	20.8	281	15.9		
Other farm expenses g/	12	1.4	25	1.4	24	0.7	20	1.1		
Total cash expenses	835	98.8	1,751	97.4	3,178	93.6	1,705	96.3		
Unpaid labour except operator	10	1.2	47	2.6	218	6.4	66	3.7		
Total current expenses	845	100.0	1,798	100.0	3,396	100.0	1,771	100.0		
Number of farms	108		161		59		328			

a/ Includes building and fence repairs, and fire insurance.

b/ Includes pasturing stock, feeds and supplements, hay lease, rent of pasture, breeding fees, veterinary and medicines, salt, sprays and sheep shearing expenses.

c/ Includes seed purchases, seed treatment, seed cleaning, fertilizer and hail insurance.

d/ Includes equipment repairs, special equipment, blacksmith, gas, oil and grease, small hardware and binder twine.

e/ Includes rent of machinery and board of crew.

f/ Includes paid labour, board of paid labour and board of unpaid labour.

g/ Includes other expenses, telephone and cash rent.

distribution of farm expenses, however, emphasizes the relation of farm size to farm type. The expenses of the livestock enterprise account for a larger proportion of total expenses on the smaller farms than on the larger. On the other hand, expenditures for labour are relatively higher on the larger farms, reflecting the adjustment of the enterprises to the family labour supply on the small farms, and the commercial aspect of production in the larger farm business. Custom work expenses account for a larger proportion of total expenses on the smaller farms than on the larger, indicating the unsuitability of certain items of equipment on the smaller farms.

Of the other items of cash outlay, crop expenses account for something under ten per cent of total expenses regardless of the size of the farm. The largest single item of expense is the cost associated with the operation and maintenance of the farm machinery, and this accounted for about 40 per cent of the total cash expenditure, or about \$2.41 per acre of crop land. This per acre cost is constant throughout the range of farm size, but reflects a saving in favour of the larger farms when custom work, being a substitute for ownership of machinery, is taken into account.

The allowance for the value of unpaid family labour shows an increase for the larger farms. This does not indicate the amount of family labour available on these farms, because the allowance was made on the basis of the amount of productive work left to be performed after the operator himself was fully occupied. It did not appear valid to charge the farm business for all family labour available irrespective of whether it was used on the farm or not.

Farm Income

When cash farm receipts and expenses have been taken into account, the net balance for the year's financial transactions may be shown. To indicate the progress of the farm business during the year, however, it is also necessary to take into account the changes in inventory that have taken place during that period. The net cash balance added to the net inventory change represents the returns to the operator for his labour, and to the capital invested in the farm. This amount is usually designated as the "Farm Income", and its relation to receipts and expenses, and to size of farm, is shown in Table 8.

Size of business is one of the main factors determining farm income. In this area, however, the relation between size and type of farm is such that the type of farming relationships are subsumed in a classification of farms according to size. In this analysis, farm income is shown in relation to definite size ranges, but the interpretation of these relationships must take into account the decreasing relative importance of livestock on the larger farm units.

For the group of farms included in this study, all items of receipts and expenses increase as size of farm increases. Considered in relation to cultivated acreage, however, it appears that total receipts and expenditures per acre of crop land tend to remain fairly constant throughout the range of farm size. The residual of receipts which remain as a return

per acre to farm capital and operator's labour, after all expenses have been allowed for, appears to be altogether independent of farm size. This return per acre of crop land for each of the three size groups under study is within \$0.19 of the average of all farms and this variation is well within the limits to be expected in a sample of this nature. When a further allowance is made for the unpaid labour of the farm family, a small but consistent increase in returns per acre is indicated for the larger farms, reflecting a larger amount of productive work on these units in which family labour may be utilized.

Table 8.- Relation of Receipts, Expenses and Income to Size of Farm, Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Size of farm			
	Up to 199	200-399	Over 400	All
	cultivated	cultivated	cultivated	farms
	acres	acres	acres	
	:	:	:	:
	- average dollars per farm -			
Receipts				
Increase of capital	808	1,194	2,694	1,337
Current receipts	1,988	4,038	7,406	3,972
Total receipts	2,796	5,232	10,100	5,309
Expenses				
Decrease of capital	364	632	722	560
Capital expenditure	892	1,297	3,129	1,493
Current expenses	845	1,799	3,396	1,772
Total expenses	2,101	3,728	7,247	3,825
Operator's farm income (return to capital and operator's labour)	695	1,504	2,853	1,484
Cash family living expenses	1,026	1,442	2,081	1,420
Number of farms	108	161	59	328
Average crop acres	132	277	518	272

For the group of farms as a whole, then, there is the situation of an almost constant return to capital and operator's labour around an average of \$5.46 per cultivated acre. The expenditure for living expenses, however, when considered on an acreage basis, tends to decline with larger farms because acreage increases faster than the increase in living expenses. The difference between the net income per acre of the respective size groups is then almost entirely a reflection of the relative importance of the family's living expenses. This emphasizes the critical income position of the smaller farms of this area. In the survey years, when the crop yields were very

close to the long-time average, returns of these farms were not sufficient to cover living expenses, and some depletion of capital was necessary to allow for this outlay. This situation is notwithstanding the unfavourable level of living expenses on these small farms in comparison with the larger farms of the area.

TYPE OF FARMING

For the farms included in this study, the livestock enterprise is relatively more important on the smaller than on the larger farms. When the type of farm organization is defined in terms of the relative importance of livestock, there is a significant relationship between farm size and farm type. The relationship between farm income and farm type must then be sought within groups of farms of comparable size. Each of the size groups of the previous analysis is accordingly sorted into two sub-groups, having respectively more livestock, and less livestock, than the average for the larger group.

In Table 9 livestock and non-livestock farms are compared within groups of farms of comparable size. In this situation differences in income and expenditure may be attributed in the main to the relative size of the livestock enterprise. It may be noted in Table 9 that the livestock farms have a consistent advantage over the non-livestock farms in farm income. The livestock farms also show higher cash outlays for living expenses, indicating that these farms have a higher level of family living along with a more favourable farm income position.

When farm income was related to size of farm, it was found that this amount was not sufficient to cover cash family living expenses on that group of farms having less than 200 acres of cropland. When type of farming, based upon the relative importance of livestock, is taken into account, it was found that among the farms having from 200 to 300 acres under cultivation the farm income on the non-livestock farms was insufficient to cover family cash living expenses. It may also be noted that within the group of larger farms included in the study, the livestock adaptation does not show an advantage over the farms having less livestock. For this group, higher receipts on the livestock farms are offset by higher expenses. The farms in this entire group are predominantly commercial grain farms and the livestock enterprises, though of considerable size, are of secondary importance. That is not to say, however, that these livestock farms are not properly adapted in relation to the individual soil conditions and other factors determining farm types; much of the basis of the livestock adaptation lies in the uncultivated area of the farm which can only be utilized as pasture. For the larger farms included in this study, the cultivated acreage on the livestock farms is comparable with that on non-livestock farms, but there is considerably more unimproved land on the farms where more than the average numbers of livestock are kept.



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FACTORS AFFECTING FARM SUCCESS

The foregoing analysis has stressed the fact that farm income is closely related to size of business and the type of organization. However, these two management factors are not the sole determinants of income. Rates of production and efficiency in production also influence the costs-returns relationships. Differences in size of farm represent variations in scale or intensity of operations whereas differences in farm types reflect variations in the combinations of crops and livestock in the farm organization. It is these variations in scale and input patterns that determine the ratio of useful outputs to the inputs consumed in the individual farm.

An indication of the earnings of individual farm enterprises may be gained from an accounting of the receipts and expenditures which are specific to each. While all the refinements associated with a complete allocation of costs and returns among enterprises are beyond the scope of this study, an approximate account is presented for the livestock enterprise and for the machinery factor on the farms included in this study. A measure of labour efficiency is given by a calculation of the operator's labour earnings and this, together with other physical measures of labour efficiency, in relation to farm size and type, is given in Table 12. Similarly, a measure of the effectiveness of the capital employed in the farm business is allowed by a calculation of the financial return to the capital investment after an allowance has been made for the value of the operator's labour. This calculation, again in relation to farm size and type, is shown in Table 13.

To examine each enterprise and input separately is to suggest that its effects are additive, though certainly these factors operate jointly in determining output and income. The following analysis does not indicate these joint effects with mathematical completeness, and is intended rather to show the general relations of factor use in the organization of the farm business in this particular area.

Livestock Enterprise

In view of the critical position of the livestock enterprise in relation to the income situation of the farms in this area, an attempt is made to isolate the livestock enterprise on these farms, and to show its net contribution to the income of the farm. Sales of livestock and livestock products and inventory accretions are, therefore, credited to the enterprise, while purchases of livestock, of feeds and supplies and all other livestock expenses are deducted as a charge to the enterprise. For a complete accounting, an investment charge should also be made, but this refinement is avoided in order to preserve the relation to previous net income calculations which are based on returns to capital and operator's labour. As well as the cash transactions in the livestock account, the livestock enterprise must also be credited with its contribution of produce to the current use of the farm family. In this area the value of livestock produce used in the home is quite considerable, tending to reflect family requirements. Any credit balance in the livestock account would then be in the manner of a return to capital and operator's labour, the capital aspect representing the use of land and equipment committed to the support of the livestock enterprise.

Table 10.- Returns from Livestock in Relation to Size and Type of Farm,
Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Size of farm									
	Up to 199		200-299		300-399		Over 400			
	crop acres		crop acres		crop acres		crop acres		crop acres	
	Number of productive animal units									
	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and
	under : over	under : over	under : over	under : over	under : over	under : over	under : over	under : over	under : over	under : over
	:	:	:	:	:	:	:	:	:	:
	- average dollars per farm -									
	:	:	:	:	:	:	:	:	:	:
Receipts										
Cattle sales	236	827	234	917	396	1,390	641	1,826		
Other livestock sales	150	294	144	470	212	410	389	468		
Livestock product sales	185	330	172	447	161	381	188	256		
Increase in livestock inventory	162	181	223	303	206	373	312	425		
Value of livestock products used on farm	279	280	293	409	359	386	392	476		
Total livestock receipts	1,012	1,912	1,066	2,546	1,334	2,940	1,922	2,451		
Expenditures										
Purchases of livestock	101	98	116	192	167	178	179	359		
Feed and pasture costs	36	57	29	58	24	47	49	84		
Other expenses	12	17	15	23	17	30	22	63		
Decrease in inventory	69	153	69	149	84	359	124	289		
Total livestock expenses	218	325	229	422	292	614	374	795		
Net returns from livestock enterprise	794	1,587	837	2,124	1,042	2,326	1,548	2,656		
Returns per animal unit	103	67	88	78	81	72	86	52		
Per cent livestock receipts from cattle sales	23	43	22	36	30	47	33	53		
Average acres cropland	123	143	243	242	343	340	512	528		
Average assessed acres	270	391	384	492	564	636	844	1,008		
Average productive animal units	7.7	23.6	9.5	27.3	12.8	32.3	18.1	50.8		

In view of the relation of the livestock enterprise to size of farm, the previous groupings according to size and type of farm are presented. The various aspects of the livestock enterprise in relation to these groups of farms are shown in Table 10.

In all cases, receipts creditable to the livestock enterprise, expenditures incurred on account of the livestock enterprise, and the net returns from the livestock enterprise were larger on the livestock farms than on those farms where fewer animals were kept. However, the net returns per animal unit comprising the livestock complement were higher on those farms in each size group which had fewer than the average numbers of livestock. This reflects the increased allowance for perquisites and livestock product sales which accrue to each animal held in the smaller herds in comparison with that allowance on a per head basis in the larger herds, which did not supply a correspondingly increased amount of these items.

Farm Machinery Costs

An indication of the effectiveness of the machinery complement on a farm is allowed by a calculation of the net machinery cost per acre of cropland for a year. In order to make a meaningful comparison of machinery costs between different sizes and type-of-farming situations it is necessary that the farming practices in each situation, insofar as these relate to machinery use, are similar. In the following calculations the machinery account is credited with increases in inventory and with receipts from custom work and sales of equipment. Charges are then made for capital purchases, decreases in inventory, on operating expenses and repairs, and outlays for custom work, as well as an interest charge on the average investment. The difference between the credits and expenditures then represents the net machinery cost per farm. This cost is shown in relation to farm size and type in Table 11.

Machinery costs per acre of cropland are shown to be directly related to farm size, with the higher costs being associated with small farms with relatively fewer acres under cultivation. For example, the non-livestock farms having less than 200 acres under cultivation had machinery costs of about \$5.00 per acre, while the non-livestock farms having more than 400 acres under cultivation had machinery costs of \$3.80 per acre for the year under review. In addition, Table 11 indicates that the machinery costs on non-livestock farms are consistently lower than the costs experienced on farms having the larger livestock enterprises.

Labour Efficiency

In the farm business, the efficiency of the labour input is of critical importance. In the first place, the returns to labour ordinarily represent a large proportion of the total returns to the farm family, and as such determine in large measure the levels of living and welfare which the family will enjoy. In this connection returns to labour are significant in two respects. First, there are major differences in these returns, as between individual farms, depending upon the effectiveness with which the labour is utilized. In addition, an estimate of the returns to

Table 11.- Returns to Capital and Machinery Operating Costs in Relation to Size and Type of Farm,
Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Size of farm									
	Up to 199		200-299		300-399		Over 400			
	crop acres	:	crop acres	:	crop acres	:	crop acres	:	crop acres	:
	Number of productive animal units									
	:14 and : 15 and		: 17 and : 18 and		: 21 and : 22 and		: 32 and : 33 and			
	under :	over :	under :	over :	under :	over :	under :	over :	under :	over :
	:	:	:	:	:	:	:	:	:	:
	- average dollars per farm -									
Credits to machinery										
Increase in inventory	313	231	389	303	357	805	995	900		
Received from custom work	46	35	51	62	60	164	137	166		
Sales of equipment	51	45	166	139	210	209	455	504		
Total credits	410	311	606	504	627	1,178	1,587	1,570		
Outlays on machinery										
Capital purchases	516	416	715	710	799	1,400	1,850	1,993		
Expense (special equipment)	204	236	474	450	671	694	961	1,140		
Decrease in inventory	81	141	139	188	192	104	228	145		
Repairs	43	58	67	86	115	114	93	164		
Custom work	109	112	194	172	155	175	154	123		
Interest on average investment	69	92	116	158	164	200	245	304		
Total outlay	1,022	1,055	1,705	1,764	2,096	2,687	3,531	3,869		
Net machinery cost	612	744	1,099	1,260	1,469	1,509	1,944	2,299		
Machinery cost per acre cropland for year	4.98	5.20	4.52	5.21	4.28	4.44	3.80	4.35		
Acres of crop per \$100 of machinery	9.4	8.0	9.1	9.1	9.8	7.5	8.9	7.3		
Average acres of cropland	123	143	243	242	343	340	512	528		
Average assessed acres	270	391	384	492	564	636	844	1,008		

farm labour permits a comparison with the returns to labour in other industries, and this comparison has significant implications for agricultural policy. A second reason for the critical importance of the labour input lies in that experience has shown it to be often the one input of the farm business which is seriously misused. In this situation, the principles of labour efficiency offer opportunities for improvement in the income position of many farms.

The amount of the returns from labour accruing to the operator and his family depends on the amount of their effort and of its productivity. The amount of this effort is usually taken as the total supply which is available over a period of time, and the term "man-equivalent", as used here, represents one adult available full time on the farm for one year.

The foregoing considerations allow the definition of efficiency factors which permit meaningful comparisons between groups of farms of different size and type. The total labour supply available on each farm is expressed in man equivalents. This supply may then be related to the acres of cultivated land, the number of animal units, or the amount of capital in land and equipment with which it is combined. These labour ratios reflect both the pattern of labour use on the farms in this area and the amounts of machinery and other capital items currently employed.

The significance of efficient labour use lies mainly in its relation to the returns to the operator and his family, and the standard of living which is thereby allowed. The income and expense account of the farm do not reflect this standard completely, since they neglect that very important portion of the family living which is contributed directly in the form of farm produce and the use of the farm dwelling. The labour earnings of the operator and his family are an adjustment of the total return to the farm capital and family labour making an allowance for capital to arrive at a labour return per se and adding to this the value of the farm perquisites. The labour earnings of the farm operators and their families as these amounts are related to various efficiency factors, are shown in the following table in relation to the main size and type of farming combinations that are characteristic of the survey area.

For the farms studied in the Carlyle-Moosomin area the operator's labour earnings were generally higher on the larger farms. Within groups of farms of similar size the operator's labour earnings on the livestock farms were higher than on those farms having less than the average size of livestock enterprise. This latter relationship did not apply within that group of farms having more than 400 acres under cultivation. In this group the non-livestock farms produced the higher labour earnings for the operator, reflecting the organization of these farms for specialized grain production.

Capital Efficiency

When all kinds of capital inputs, including land, are considered together, it is possible to estimate the returns to farm capital in the same way in which the returns to farm labour were calculated. Taking the total returns to the operator and farm capital, an arbitrary wage may

Table 12.- Measures of Labour Efficiency and Labour Earnings in Relation to Size and Type of Farm, Carlyle-Moosomin Area, Southeastern Saskatchewan, 1947-48

	Size of farm									
	Up to 199		200-299		300-399		Over 400			
	: crop acres :		: crop acres :		: crop acres :		: crop acres :		: crop acres :	
	Number of productive animal units									
	: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and : 33 and		: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and : 33 and		: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and : 33 and		: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and : 33 and		: 14 and : 15 and : 17 and : 18 and : 21 and : 22 and : 32 and : 33 and	
	: under : over :		: under : over :		: under : over :		: under : over :		: under : over :	
	:	:	:	:	:	:	:	:	:	:
Man equivalents	1.18	1.35	1.27	1.65	1.64	1.85	1.91	2.58		
Acres of crop per man equivalent	104	106	191	147	209	184	268	205		
Animal units per man equivalent	6.5	17.5	7.5	16.5	7.8	17.6	9.5	19.7		
Machinery per man equivalent (dollars)	1,472	1,710	2,380	2,396	2,495	2,706	3,213	2,942		
Total capital per man equivalent (dollars)	6,332	8,716	9,928	10,516	11,143	12,819	13,362	13,448		
- dollars per farm -										
Return to capital and operator's labour	604	832	1,059	1,524	1,682	2,153	2,996	2,632		
Allowance to average investment at 5 per cent	374	589	630	868	914	1,186	1,305	1,735		
Return to family labour	230	243	429	656	768	967	1,691	897		
Use of house, and farm products used	609	816	670	947	819	909	1,072	1,053		
Operator's labour earnings	839	1,059	1,099	1,603	1,587	1,876	2,763	1,950		
Operator's labour earnings per man equivalent	711	784	865	972	968	1,014	1,446	756		
Number of farms	61	47	54	51	29	27	36	23		
Acres of cropland	123	143	243	242	343	340	512	528		

Table 13.- Returns to Capital and Machinery Operating Costs in Relation to Size and Type of Farm,
Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Size of farm									
	Up to 199	:	200-299	:	300-399	:	Over 400	:		
	crop acres	:	crop acres	:	crop acres	:	crop acres	:	crop acres	
	Number of productive animal units									
	14 and : 15 and :	:	17 and : 18 and :	:	21 and : 22 and :	:	32 and : 33 and :	:		
	under : over :	:	under : over :	:	under : over :	:	under : over :	:	under : over :	
	:	:	:	:	:	:	:	:	:	:
	- average dollars per farm -									
Returns to capital:										
Return to operator's										
Labour and capital	604	832	1,059	1,524	1,683	2,153	2,997	2,631		
Allowance to operator	1,200	1,200	1,200	1,200	1,200	1,200	1,200	1,200		
Return to capital	-596	-368	-141	-324	483	953	1,797	1,431		
Per cent return to capital	-8.0	-3.1	-1.1	2.9	2.6	4.0	6.9	4.1		
Average cultivated acres	123	143	243	242	343	340	512	528		
Average assessed acres	270	391	384	492	564	636	844	1,008		
Average productive animal units	7.7	23.6	9.5	27.3	12.8	32.3	18.1	50.8		

be allowed to the operator for his labour and management, and the remainder imputed as a return to the capital investment. The ratio of this return to the total investment then permits a comparison of the effectiveness of capital use in relation to farm size and organization.

The same reservation to these results applies as for the estimates of returns for labour, namely, these calculations assume that the contribution of the individual factors to income is separate and additive, whereas their operation is of a joint character. In addition, the returns to capital are largely determined by the assumption regarding the value of the operator's labour, so the returns to capital shown are valid only for comparative purposes. In the actual situation on the small farms, the labour return to the operator would be less than \$1,200, and perhaps even low enough to allow some return to capital.

It may be noted that in general the larger farms earned a higher return to capital investment than did the smaller units. It is significant too, that on the average the farms having less than 200 acres cultivated and the non-livestock farms having from 200 to 300 acres cultivated, earned a negative return to the capital invested after making an allowance of \$1,200 per year for the operator's labour and management. Among the largest farms included in the study, the crop adaptation provided a higher return to capital than was obtained on farms with larger livestock enterprises.

OPERATORS' NET WORTH AND FINANCIAL PROGRESS

For an appraisal of the farm business which goes beyond an examination of one year's business transactions, the net worth of the farm operator may be examined. The current position of his assets in relation to liabilities is significant in two respects. In the first place, the net worth ordinarily indicates the net investment of the farm operator, which he has saved from his farming operations and applied towards the ownership of his farms. Secondly, in relation to his net worth when coming on to his present farm, current net worth reflects the farmer's experience in accumulating savings out of his earnings from the farm.

The net worth situation of farmers in the Carlyle-Moosomin area in 1948 is shown in Table 14. In general, net worth is very closely related to size of farm, with the major differences within size groups being associated with the livestock complement. In this area the ratio of assets to liabilities is very high, indicating a very favourable solvency position which would not be vulnerable to ordinary reverses in general farming conditions.

The average gain per year in net worth has often been taken as a measure of the financial progress of the farm operator. In this study, the financial progress of the operator has been related to the period of his operation of the farm. It will be noted that the group of farmers who have begun operating their farms within the last five years have made a conspicuously faster gain than all other groups, and that in general the longer periods of operation are associated with smaller annual gains. In the past few years, a considerable number of farms in the area have been passed from father to son,

often on very favourable terms. Three or four years of good yields and prices have combined to enable this group to show very favourable progress. Longer periods of operation reflect the depressed conditions of the 1930's.

It is not possible to disregard contemporary price levels in the respective valuations that are involved in comparisons of net worth between time periods, and in this respect, operators who began farming five to ten years ago have experienced a considerable increase in net worth merely from the increase in the price level during that time. The general relations of the rate of financial progress of farm operators to the periods during which they have been farming are shown in Table 15.

Table 15.- Average Annual Change in Net Worth, Carlyle-Moosomin Area, Southeastern Saskatchewan, 1947-48

Number of years on farm		Changes in net worth per year
		- dollars -
0 - 5		3,910
6 - 10		1,670
11 - 15		1,120
16 - 20		940
21 - 25		640
26 - 30		600
30 and over		590

Farm Surplus in Relation to Financial Progress

The farm income, or returns to capital and operator's labour, does not always indicate the opportunity of the operator to accumulate savings and expand the scale of his farm business. Before providing for farm progress, farm income must first provide for the living costs of the farm family. When the operator's farm income has been credited with an allowance for family labour contributions and cash family living expenses are deducted from the total returns to capital and family labour, the remainder may be defined as the "Farm Surplus". For each farm, this surplus represents the amount of money available from the year's operations for savings or further investment in the farm. It is this measure of the financial results of farming that is most closely related to the financial progress of the operator. The relationships between farm income, living expenses and the farm surplus with respect to the size of farms in the survey area is shown in Table 16.

It will be noted that the small farms in the area experienced a loss in the year under review, notwithstanding the favourable crop conditions prevailing during that period. It may be recalled that a loss also occurred on the group of non-livestock farms having between 200 and 299 acres cultivated. This situation emphasizes the difficulty facing this group of farms. These are the units which are something smaller than an economic unit, but the living expenses of the family, in relation to the earning capacity

Table 16.- Relation of Receipts, Living Expenses and Surplus to Size of Farm,
Carlyle-Moosomin Area, Southeastern Saskatchewan, 1948

	Size of farm			
	Up to 199:	200-399	Over 400	All
	cultivated	cultivated	cultivated	cultivated
	acres	acres	acres	farms
	:	:	:	:
	- average dollars per farm -			
Operator's farm income (return to capital and operator's labour)	695	1,504	2,853	1,484
Board of unpaid labour	31	51	11	52
Value of unpaid labour	10	47	208	64
Return to capital and family labour	736	1,602	3,072	1,600
Cash family living expenses	1,026	1,442	2,081	1,420
Farm surplus	-290	160	991	180
Number of farms	108	161	59	328
Average crop acres	132	277	518	272

of the business, do not leave any surplus available for enlarging the farm. It may be observed too that a deficit is experienced on these farms even though expenditures for family living are less than half the living expenses of families on the larger farms in the area. 1/

1/ MacNaughton, M.A., J.M. Mann and M.B. Blackwood, Farm Family Living in Southeastern Saskatchewan, Economics Division, Department of Agriculture, Ottawa, Ontario, 1950.

SUMMARY

(1) The survey area comprises ten municipal units in the park belt in Southeastern Saskatchewan.

(2) The native vegetation which covers most of the area is the American aspen grove.

(3) In 1948, over one-half of the quarter section parcels in the area had less than 80 cultivated acres.

(4) On 328 farms visited about 53 per cent of the total area was cultivated in 1948.

(5) Wheat was the most important single crop in that year and all grains accounted for about 62 per cent of the total cultivated acreage.

(6) About one-third of the total cultivated area was in summerfallow in 1948.

(7) Farm capital in the area averaged \$70 per acre of cropland on smaller farms, \$62 per acre on medium sized farms and \$57 per acre on the larger farms in the sample.

(8) Farm receipts averaged about \$2,000 per farm on the small farms, \$4,000 per farm on the medium sized farms and about \$7,500 per farm on the larger farms.

(9) Cash expenses averaged about \$835 per farm on the smaller farms, \$1,750 per farm on the medium sized farms and almost \$3,200 per farm among the larger farms.

(10) The farm income or return to capital of operator's labour averaged \$695 per farm for the smaller farms, about \$1,500 per farm for the medium sized and about \$2,850 per farm for the larger sized farms.

(11) Farm income was greater on farms having more than average numbers of livestock, except for the larger highly specialized grain producing units.

(12) Farm income was high on those farms having the highest ratios of farm capital per man equivalent.

(13) Farm progress has been most rapid on farms established during the recent period of rising farm prices.



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